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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/785,215 | 02/20/2001 | Martin Roland Jensen | 3631-0107P | 7660 |

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| EXAMINER | |
|---|---|
| LYLES, JOHNALYN D | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1649 | |

DATE MAILED: 08/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/785,215 | JENSEN ET AL. | |
| | Examiner | Art Unit | |
| | Johnalyn Lyles | 1649 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *14 March 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1,3,4,7-10,17-19,25-29,33,59,60,62-69,71,72 and 74-80* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,4,7-10,17-19,25-29,33,59,60,62-69,71,72 and 74-80* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1,3,4,7-10,17-19,25-29,33,59,60,62-69,71,72 and 74-80* are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/14/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.



5-00

## DETAILED ACTION

1. The Examiner of U.S. Patent Application No. 09/785,215 has changed. In order to expedite the correlation of papers with the application please direct all future correspondence to **Examiner Lyles**, Technology Center 1600, Art Unit 1649.

2. The amendment filed 3/14/2005 has been entered into the record and has been fully considered.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### *Claim Objections*

Claim 71 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 1.

Claim 76 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 74.

Claim 78 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 77.

Claim 80 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 79.

When two claims in an application are duplicates or else are so close in content that they both cover the same thing, **despite a slight difference in**

**wording**, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

In the instant case, claim 1 and claims 76, 77, and 80 recite "an analogue" of autologous Aβ or autologous APP "wherein is introduced at least one isolated foreign T helper epitope by means of insertion, addition, deletion, or substitution" and claims 71, 74, 78, and 79 recite a modified Aβ or APP polypeptide "wherein said Aβ or APP polypeptide differs . . . in that it comprises at least one isolated foreign T helper epitope. Furthermore, the specification (pg 19) defines "analogue" as an amyloidogenic polypeptide, which has been subjected to changes in primary structure. Such a change can e.g. be in the form of fusion of an amyloid polypeptide to a suitable fusion partner and/or it can be in the form of insertions and/or deletions and/or substitutions in the amyloidogenic polypeptide's amino acid sequence. Further, it recites that encompassed by the term are derivatized amyloidogenic molecules, of the discussion below of modifications of amyloidogenic polypeptides. The specification (pg 22) notes that "modified," means a chemical modification of the polypeptide . . . and the preferred modifications comprise changes to the primary structure. Thus, the claims noted above appear to be duplicates as the claims refer to presenting or administering the same polypeptides.

***Rejections Withdrawn***

Rejection of claims 1, 10, 27, 28, 33, 59, 60, 65, 70, 71, 73, 74, and 76 are withdrawn because Frangione *et al.*, US Patent Application Publication

2002/0077255 A1 (20 June 2002) claims benefit of US provisional application 60/205,578 (filed 5/22/2000) and is not prior art of the instant application, filed 02/20/2001 which claims benefit of 60/186,295 (filed 03/01/2000).

***Rejections Maintained or New, Necessitated by Amendment***

***Non-Statutory Obvious-Type Double Patenting***

Claims *1, 3-4, 7-10, 17-19, 25-29, 33, 59, 60, 62-69, 71, 72, and 74-80* remain provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-22 of copending Application No. 10/204,362. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to a method involving administration of a compound comprising autologous Aβ or autologous APP, wherein is introduced at least on isolated foreign T-helper epitope and wherein said compound induces production of antibodies against autologous Aβ or autologous APP. This is a provisional obviousness- type double patenting rejection because the conflicting claims have not in fact been patented.

Claims *1, 3-4, 7-10, 17-19, 25-29, 33, 59, 60, 62-69, 71, 72, and 74-80* remain provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of copending Application No. 10/223,809. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to a method involving administration of a compound comprising

autologous Aβ or autologous APP wherein is introduced at least on isolated foreign T-helper epitope and wherein said compound induces production of antibodies against autologous Aβ or autologous APP. This is a provisional obviousness- type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 102***

Claims 1, 3, 4, 7, 8-10, 17-19, 25-29, 33, 59-60, 62-63, and 64-69, 71-72, and 74-76 remain rejected under 35 U.S.C. 102(e) as being anticipated by **Schenk, US Pat No. 6,787,637 (7 September 2004)**. Claim 63 is rejected because it depends from the rejected base claim.

Claims 1, 10, 59-60, 69, 71, 74 and 76 remain rejected under 35 U.S.C. 102(e) as being anticipated by **Schenk, US Pat No. 6,787,523 (7 September 2004)**.

Patents 6,787,637 and 6,787,523 are related as the references both by Schenk teach the same methods for treating amyloid beta deposits by administering Aβ peptide and/or an antibody that induces an immunogenic response and are therefore cumulative. The rejection as set forth below with respect to the cited passages from reference US '637 are the same as in reference 6,787,523 and may differ only in the sited column, line, and/or page number.

US '637 teaches a method of treating a disease associated with amyloid deposits of Aβ in the brain of a patient including but not limited to Alzheimer's

disease and/or Down's syndrome comprising administering an immunogenic Aβ fragment conjugated to a T helper cell and/or B-cell epitope. The teachings of US '637 include all natural human amino acid sequences as well as analogs such as but not limited to allelic, species, and induced variants of Aβ and APP, and multimers, thus meeting the limitations of claims 1, 8, 71, 74, and 76 (Col. 3 lines 15-65; Col. 11 lines 55-65). Further support can be found in the priority document (pg. 10-12; section II, Therapeutic Agents and pg 23).

The teachings of US '637 include but are not limited to helper T cells such as tetanus toxoid, diptheria, influenza Hemagluttinin HA, malaria CS (P. falciparum is the causative agent of malaria; thus the two epitopes are the same), and MHC II epitopes, thus meeting the limitations of claims 10, 59, 60, and 69 (Col. 20 lines 20-60). Further support can be found in the priority document (pg. 8, and 23-24).

US '637 teaches a "first moiety" B-cell antigen, a "second moiety" IL-1, IL-2, IL-12, M-CSF, and a "third moiety" 3 De-O aceylated monophosphoryl lipid A, copolymers, lipids, cellulose (a carbohydrate), agarose, polyethylene glycol, thus meeting the limitations of claims 3, 8, 62, 64, 72, and 75 (Col. 28 lines 5-65; Col. 29 lines 40-65). Further support can be found in the priority document (pg. 18, and 29-32).

US '637 teaches that the immunogen may be conjugated via chemical crosslinking or expressed a fusion protein to glycols such as propylene glycol or

polyethylene glycol, thus meeting the limitations of claims 4, 7, 17-19, 25, 64, and 65 (Co1. 20-244 Col. 27 lines 35-56; Col. 29-30). Further support can be found in the priority document (pg. 24 and 32).

US '637 teaches that the immunogen is capable of inducing an immunological response against itself thus meeting the limitations of claims 9 and 26 (Col. 20-244 Col. 27 lines 35-56; Col. 29-30). Further support can be found in the priority document (pg. 10).

US '637 teaches that the administration of the immunogen may be at least one a year, twice a year, or three times a year, in the range of 1-500 μg per patient via one or any of the following routes: parenteral, peritoneal (intraperitoneal), oral, intracranial, intramuscular (which encompasses buccal), suppositories (which encompasses anal), and intravenous (which encompasses spinal and epidural) by means of a sustained release device (encompassing a VLN), thus meeting the limitations of claims 27, 28, 29, 33, 66, 67, and 68 (Col. 26 lines 36-65; Col. 27 lines 35-56; Col. 30 lines 15-45). Further support can be found in the priority document (pg. 3 and 27-29).

Applicant argues in the response (pg 13, Remarks, dated, 3/14/05) that the Schenk patent (US 6, 787,637) is not proper prior art to the present application because Schenk '637 was granted from an application that was a continuation-in-part (CIP) of patent application 09/322,289 which was filed on 5/28/99; and that the rejection is based on material added to the Schenk upon the filing of the CIP (5/26/00) not previously disclosed in the application 09/322,

289 (filed 5/28/99) and thus not prior art to the instant application which claims priority to the provisional application 60/186,295 (filed 03/01/2000).

Applicant's arguments have been fully considered but are not persuasive for the following reasons. Although the Schenk '637 was granted from an application which itself was a continuation-in-part of serial no. 09/322,289 (filed 5/28/99) as suggested by Applicant, the rejection is based on subject matter also disclosed in the parent application. Schenk, US Patent No. 6,787,637 is a continuation of US SN 09/580,018 (filed 5/26/00), now US Patent No. 6,761,888, which claims benefit to US SN 09/322,289 (filed 5/28/99); and US SN 09/580,018 is a continuation-in-part of 09/322,289 (filed 5/28/99). The Schenk '637 is proper prior art to the instant application filed 02/20/2001, which claims benefit to the provisional application 60/186,295 (filed 03/01/2000) because the subject matter in the Schenk '637 patent is common in the continuation application US SN 09/580,018 and the parent application US SN 09/322,289. Thus, the rejections noted above are maintained because the subject matter of the rejection can be found in the parent application 09/322,289 (filed 5/28/99) as noted in the above rejections. Applicant also argues (pg 14, Remarks) comparison of the two texts reveals that the subject matter added into the continuation-in part application corresponds to substantially all of the disclosure in the section of the Schenk '637 patent entitled "XVIII. Prevention and Treatment of Human Subjects" beginning on page 69 through the end of the sequence listing. The Examiner finds this to be incorrect, and Applicant has not identified any elements of the claims, which are specifically missing. In fact, a comparison of the initial application

09/322,289 and the Schenk '637 patent, which issued from the CIP (09/80,018) reveals that the subject matter rejected is commonly disclosed in all three; in particular the subject matter is disclosed in the parent application (09/322,289 filed 5/28/99) which is prior art of the instant application as noted above in the rejection.

Further, Applicant argues (p 14, Remarks) that Applicant has amended the claims, particularly claims 1 and 76, to delete reference to coupling to a polyhydroxypolymer carrier backbone since the comments in the Office Action seem to focus on teachings that relate to administering immunogenic Aβ fragment "conjugated to" a T-helper cell and/or B cell epitope, in order to distinguish the present invention, which is directed to introduction of isolated foreign T-helper epitopes into the Aβ or APP sequence from the Schenk '637. This is not persuasive because the Schenk '637 patent teaches therapeutic agents that induce an immune response against Aβ peptide including T-cells that bind to Aβ peptide (pg 10 and 23 of 09/322,289) and that the peptide immunogens may be linked to a suitable carrier to help elicit an immune response or expressed as a fusion protein at the amino terminus, the carboxyl terminus, or internally (pg 24 of 09/322,289) or as recited in the '637 patent, "fusion proteins comprising a segment of Aβ fused to a heterologous amino acid sequence that induces a helper T-cell response against the heterologous amino acid sequence" (pg 11 of US Pat. 6,787,637).

Thus, all of the arguments have been fully considered but are not persuasive for the reasons of record and as noted above.

***New, Necessitated by Amendment***

Claims 77-80 are rejected under 35 U.S.C. 102(e) as being anticipated by **Schenk, US Pat No. 6,787,637 (7 September 2004)**.

Claims 77-80 are rejected under 35 U.S.C. 102(e) as being anticipated by **Schenk, US Pat No. 6,787,523 (7 September 2004)**.

Patents 6,787,637 and 6,787,523 are related as the references both by Schenk teach the same methods for treating amyloid beta deposits by administering Aβ peptide and/or an antibody that induces an immunogenic response and are therefore cumulative. The rejection as set forth below with respect to the cited passages from reference US '637 are the same as in reference US '523 and may differ only in the sited column, line, and/or page number.

Claims 77-80 refer to subject matter previously rejected with respect to claim 1. US '637 teaches a method of treating a disease associated with amyloid deposits of Aβ in the brain of a patient comprising administering an immunogenic Aβ fragment as well as analogs such as but not limited to allelic, species, and induced variants of Aβ and APP including APP770, and multimers of monomeric immunogenic agents conjugated to a T helper cell and/or B-cell epitope. Also the sequence listings of US '637 fully encompass the residues 672-714 and 700-714 of the amino acid sequence of instant SEQ ID NO: 2 (see Sequence Listing; Col. 11 lines 20-35). Thus, the teachings meet the limitations, wherein the analogue or the modified Aβ or APP is selected from the group consisting of "three

identical APP fragments" consisting of amino acids of SEQ ID NO: 2 separated by at least one T helper epitope. Further support can be found in the priority document (pg. 7 and 12).

***Conclusion***

No claims are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Advisory Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johnalyn Lyles whose telephone number is 571-272-3433. The examiner can normally be reached on M-F 8 am - 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres can be reached on 571-272-0867. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SHARON TURNER, PH.D.
PRIMARY EXAMINER

7-10-05

jdl